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ABSTRACT

Secondary school teachers can benefit from teacher centers that use an experiential approach. Experiential learning involves the immersion of the teacher in experiences that necessitate the use of new skills. A new approach to a problem leads teachers to examine both old and new skills and their professional attitudes, practices, and beliefs. This personal and professional reappraisal leads to improvement in teaching methods and curriculum. The activities outlined in this booklet are examples of thought-provoking, stimulating, and challenging experiential learning activities that teacher centers can use. (CJ)

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TEACHER CENTER PROJECT

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Teacher Centers & Secondary School Teachers

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Teacher Centers and Secondary School Teachers

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What This Booklet Is About

This booklet, which is addressed to teacher center leaders, discusses how teacher centers can serve secondary school teachers. It is based on seven key assumptions:

- Secondary school teachers are concerned about professional development and will become involved in a teacher center if they perceive the programs to be appropriate.
- Secondary school teachers prefer a hands-on approach to professional development that combines theory and practice to an approach in which an expert tells them what they need to know.
- Secondary school teachers can gain important insights into their role as a teacher by becoming a learner in an atmosphere of mutual support and encouragement.
- Most secondary school teachers have adequate access to information about the cognitive aspects of their particular subject, but not to information about more appropriate methods of conveying their subject to students.
- Examination of the structure and function of American secondary school education is an inescapable part of any teacher center program that broadly influences secondary school teachers.
- Teacher centers should help secondary school teachers assess the appropriateness of existing educational strategies and help them design new strategies to replace those no longer suitable for modern youth and culture.
- Needs-assessment responses like motivation, discipline, classroom management, and back to basics are symptomatic of more serious shortcomings in American secondary school education. Teacher centers organizing to serve secondary school teachers must also attempt to resolve some of the fundamental problems of secondary school education, such as class size and school schedule.

Using General Approaches with Secondary School Teachers

Many of the approaches that teacher centers use with elementary school teachers can be used with secondary school teachers. First, there are the approaches that say, "Welcome": a climate that invites participation; involvement in decision making; visible support and encouragement; a comfortable relaxed atmosphere in which to interact with other teachers; and resource materials that are appropriate, stimulating, and relevant to current trends and interests. Again and again, teacher center personnel say, "Reach out to secondary school teachers; don't sit back and wait for them to come to the center."

Second, most teacher centers probably already have policy- or advisory-board members who are secondary school teachers. You can take that representation one step further by having at least one person on the teacher center staff who has a strong background in secondary school education. A secondary-level staff person is a precious commodity. As one teacher center director remarked, "Most centers take on the personality and experience base of the center staff." (For teacher centers with very small staffs—e.g., just a director and a secretary—this secondary school influence will probably have to come only from the policy or advisory board.)

Third, you can try some simple, proven techniques for involving secondary school teachers:

- Looking at the teacher center through the eyes of a secondary school teacher, and asking, Is this a place for me?
- Making the newsletter appeal to secondary school teachers; taking some back issues (or examples from other teacher centers) and talking to secondary school teachers about the content and format
- Finding some secondary school teachers to serve on a site/space committee and urging them to help design a teacher center that will appeal to all teachers
- Using the budget in ways that can help to build ownership among secondary school teachers: forming a publications committee with both secondary and elementary school members to select books and other materials for the library; finding out how various organizations are already involving secondary school teachers and how the teacher center can tap into their materials and resources; creating a mini-award program to which all teachers can apply for small amounts of money for research, curriculum development, etc., and writing the guidelines so that the teacher center's interest in secondary school

teachers is clear. For example: "These mini-awards are meant to support curriculum development and research activities such as creating a peer-teaching approach for high school biology or developing a course for parents on the changing role of the adolescent in our culture."

Fourth, you can do a needs assessment that goes beyond a simple checklist of concerns like motivation, classroom management, and discipline. Go into the secondary schools and find out what kinds of problems related to the structure of secondary school education (scheduling, tracking, class size, electives versus required subjects, grading, etc.) are giving teachers (and students) the most trouble. For example, a junior high school teacher just starting an assignment in a school with nine-week blocks may feel no need at all for a workshop on "Discipline" that focuses on transactional-analysis techniques, but will sit up and take notice of a workshop on "Team Building" or "Group Process" for use with students who will be together for only a short period of time. A workshop on "Techniques for Teaching the Short Story" might attract a few curious teachers whereas a seminar on "Developing Consistency in the Evaluation of Creative Writing" could become the springboard for continuing discussion about the methods various teachers use to assess student writing. For example, how do teachers differentiate "A" work from "B" work in the research and writing style of a term paper?

Look for ways to work with secondary school teachers at the building (faculty) level as well as at the individual level. Visit faculty meetings and find out what kinds of problems never seem to be resolved in that forum. For example, if a school is facing an evaluation by a regional accrediting association and the faculty meetings seem to focus mostly on the mechanics of filling out the forms, the teacher center might help various departments set goals and write objectives. Or if the science department is concerned with declining enrollment, the teacher center might survey student interests and opinions about the science curriculum.

Look also for ways to increase communication across disciplines. Is there an astronomy teacher who has good ideas about the application of astronomy to other subjects? Encourage him or her to give a workshop. Is there a science teacher who is excited about Bronowski's series, *The Ascent of Man*? Suggest a mini-award to develop an interdisciplinary approach to science and literature or history.

Fifth, think about the implications of saying to teachers, What are your needs? To answer that question a teacher must feel confident enough about his or her position to admit having problems. A teacher center director in Connecticut thinks that the way to start is to ask secondary school teachers what they can give to the teacher center. Not only does that seem to be a great way of finding out about new resources, but it is a much safer

and hence more appropriate entry point for the secondary school teacher. Ask the biology teacher to conduct a workshop or seminar for elementary school teachers who would like to do more with ecology but lack a strong background in it. Ask the history teacher to help develop a course in local history for the upper elementary school grades. Ask the shop teacher to help out with cardboard carpentry. Doing so may hook some teachers who would not come forward with needs.

The five general approaches that I have just described are suggestive of possibilities, not exhaustive. Look closely at all approaches that represent sound educational practice regardless of grade level.

Digging into the Secondary School To Find Programs for the Secondary School Teacher

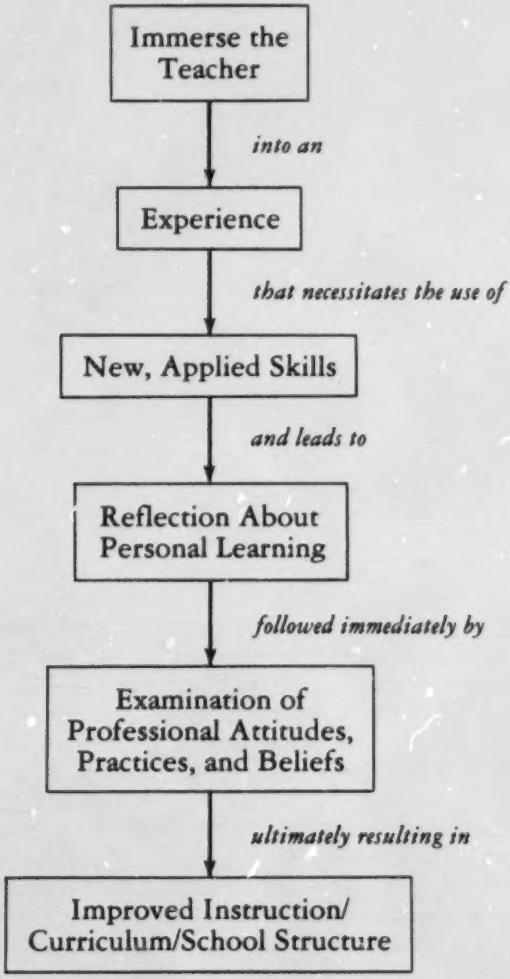
Although the secondary school teacher can be significantly helped by the general approaches discussed in the preceding section, really involving secondary school teachers in a teacher center requires a continuing reappraisal of the structure and function of secondary school education in light of the evolving culture outside the school. The reappraisal might be guided by three propositions:

- School practices must be examined again and again against our answers to the question, What skills and experiences must students have throughout their schooling to be fully functioning, healthy, effective people? The worth of the answers will be directly proportional to our ability to question our most cherished traditions and habits.
- From the outset the examination must involve the larger community. The school curriculum is but one of many curriculums that shape the minds and lives of students. Any profound school change is going to run smack into a variety of influences outside the school (family patterns, work habits, community laws, values, and traditions).
- Teachers can learn new skills to use in the examination through participation in community-based experientially oriented workshops and seminars that are built around a teacher center and its support/advisory/resource functions.

Schematically this process of in-service education and school/curriculum improvement can be viewed as charted in Figure I.

Immerse the teacher means actively involve teachers in an experience rather than have them passively observe it. The experience should be structured to encourage and support each teacher's direct involvement as a

Figure I.—An Experiential Approach to In-Service Education.



learner. Too often teachers think and act only as a teacher; they focus exclusively on the teaching aspect of the educational experience. The concept of the teacher as a learner implies that the role of teacher can also be examined in light of the teacher's own experiences as a learner. Some of

the best philosophy of education results from such an examination. Good programs for secondary school teachers should always begin with the questions, How can we structure this program to actively involve teachers in the concepts that are central to the program? and How can we structure this program so that teachers can learn through their own experiences?

The *experience* in which the teacher is immersed may take a wide variety of forms. It may be as complex as a semester-long college-credit course or as brief as a 15-minute introduction to a two-hour workshop. Whatever the length, the key is the nature of the experience. Does it impel people to act? Does it demand decision making? Does it provide the participant with some immediate feedback from which to draw inferences about the validity of the experience? John Dewey set the stage for thinking about this component when he wrote that not all experiences are necessarily educative; some might even be miseducative. For example, many traditional in-service programs sacrifice context for content. One workshop designer to another: "I know small groups would be nice, but let's just keep them in a large group and use the overhead projector to outline the new method for developing oral-history packets. We've only got two hours to work with, you know." It is not difficult to imagine some of the teachers attending that in-service session leaving the room turned off by or at least passive about oral history. Perhaps *miseducative* is too strong a word, but seldom are secondary school teachers given the chance to participate in an experience that is consciously designed to involve them as an active learner. How are you to know whether an oral-history approach will improve instruction and ultimately student learning until you give it a try for yourself?

Experiences that necessitate the use of *new, applied skills* provide the context for the teacher as a learner to reflect about personal learning. The skills need not be fancy. For example, they might be the interviewing skills of oral history, which teachers might learn by being challenged to go into the community and identify the three most significant social, economic, or cultural changes in the last 25 years. Obviously for some teachers, the more new skills they use, the more they will be able to think about their own learning habits and styles.

The progression from use of new applied skills to *reflection about personal learning* is greatly aided by altering the context or approach to which teachers are accustomed. Thus, instead of reading about the oral-history method, the teachers in the above example would gather raw historical data through interviews. That would set the stage for them to draw parallels to their own classroom.

Drawing parallels to their own classroom brings teachers' *professional attitudes, practices, and beliefs* into sharp focus. Such an examination of teaching from a base of understanding their own learning can ultimately result in *improved instruction/curriculum/school structure.* Of course, it does

not always happen as neatly as 1-2-3. However, insights into what motivates the teacher to learn, paralleled by careful thought about what motivates students to learn, can become the basis for a series of extended teacher center experiences. To stay with the previous example, after teachers have actually recorded oral history, the teacher center could provide them with examples of how other teachers have used oral history with tenth graders. Or the teacher center might provide advisors to help the teachers develop new approaches to classroom instruction and help them observe how students respond. Or the teacher center staff might interview students to provide insights into which current instructional activities seem trivial and a waste of time.

This style of in-service education has a high *aha!* quotient. Place participants in a situation in which they can learn about their own learning, and there will probably be an *aha!* For example, so often the typical faculty meeting convened to discuss student motivation ends up being a rehash of the same old concerns—"These kids just don't seem to want to learn anymore!" or "I know they know a lot more than they show on my exams!" Contrast that with an experiential workshop that stimulates the teacher to think of his or her own motivation in new learning situations, and the *aha!* might go something like this: "You know, I found I had to psych myself up to accept a possible failure before I could really dig in to solve the problem!" That *aha!* has a lot of meat to it. It places the emphasis on the nature of the learning situation rather than on the final outcome. With that sort of insight a teacher center and a teacher can enter into a relationship that has the potential for going beyond the Band-Aid approach. Teacher center staff can say to the teacher, "Let's look at those situations in your classroom when student motivation is highest and see if we can discover their key elements," thereby creating an air of creativity and innovation instead of just focusing on what is wrong.

The approach outlined above is aimed directly at two of the three propositions listed at the beginning of this section. The third proposition, that the broader community must be included in any substantial change in secondary school education, is at the heart of a second level of the examination. Once a teacher begins to look carefully at the process of learning that is taking place in the classroom, the door is wide open to an exploration of the relationship of that process to the total education of the student. If five national commissions convened in the early 1970's are still correct in their analysis of secondary school education and American adolescents (see Appendix 1 for descriptions of their reports), the second level of examining teaching and learning strategies must focus on the following problems: the continued age segregation of youth; the continued isolation of youth from the adult world outside the school; and the continued withholding of responsible, challenging action from a youth population that is becoming

increasingly society conscious and growing restless with learning activities that seem to block interaction with the real world rather than encourage it. Students quite naturally lose interest in learning situations that have little immediate impact on their lives. In any event, once the focus of discussion turns to learning, it is impossible to eliminate the world outside the school from consideration of the most appropriate curriculum; adolescents spend the majority of their day (and night) in nonschool activities in the larger community.

Experiential In-Service Activities That Work

Program development for secondary school teachers should proceed on two levels. First, teacher center staff should constantly be in the schools talking with teachers about their day-to-day concerns. An informal needs assessment will reveal much about the structure and function of the secondary school and should provide the impetus for a number of workshops and seminars on such topics as "Developing a Peer-Teaching Approach for Tenth Grade English," "Working with Students and Parents To Develop Better Home Study Skills," and "Using Computers in the Teaching of High School Biology."

That approach to program development for the secondary school teacher is consistent with the concept of a teacher center as a place where teacher interests and needs are directly translated into in-service programs. But to really have an impact on secondary school education, teacher centers need to stimulate discussion and examination of the nature of the secondary school and its students. At this second level of program development the teacher center should initiate experiences that build on activities undertaken in the more conventional first level of program development.

Some of you may be saying, "Whoa! I'm not going to shove anything down the teachers' throats. The initiative has to come from them. That's what a teacher center is all about!" My response is this: Teacher centers must be ready to take some risks, perhaps the most important of which is to initiate experiences that stand a good chance of pushing beyond worn-out methods of thinking about self-improvement and school improvement. Instead of forming another task force to look at student motivation, offer teachers a chance to learn about their own motivational habits and from that experience to draw some inferences about the nature of the secondary school experience. Instead of debating the need for basic skill development and a return to the three R's, offer teachers an opportunity

to interact with the broader community about the basics as they apply to the world beyond the classroom. Start with what teachers need and want, but extend beyond old habits to create a forum for innovative debate. Conduct a thorough needs assessment, but also initiate programs that are open-ended, that stimulate discussion. If you wait for all the initiative to come from the teacher, small problems may grow to crisis proportions. Get out into the schools, talk to teachers and students, find out what aspects of the structure and function of the secondary school are most worrisome, and design an experience that gives teachers license to rethink their most cherished practices. Foster a climate that says to a secondary school teacher, "Schooling is not a static process; it is constantly changing. Let's find out what is working best today and discover ways to do more of what works and less of what does not." For many teachers in many different settings, experientially oriented in-service education provides just that type of climate.

Following are examples of teacher center activities that engage teachers in examining their own learning and teaching and in examining educational practices in light of the broader forces that influence adolescents. All of the activities have been or are being used at teacher centers, but are not yet well known. They are presented as illustrations for adaptation rather than as prescriptions for cures. They are intended to encourage thought and discussion about personal learning and professional practice. In that regard they are only as useful as you make them. Simply to read them will limit you to the intellectual side of understanding. Choose one or two that seem to have some potential for your situation, and try them. Pick them apart, modify them, adapt them. If in the end your version is so different as to be virtually brand new, so much the better. As long as you hold to the concept of the teacher as a learner and help the learning teacher become the questioning teacher, and as long as you go to the second level of involvement with the broader community, you are right on target.

The selection of activities begins with experiences that can occur within a short block of time and require little special material or equipment. The last two activities are extended experiences that might be adapted by a teacher center looking for new ideas for a summer institute or a semester-long course on weekends. All of the activities consist of structured events that are designed to use the assumptions inherent in the flowchart in Figure I.

An important consideration in planning any of the activities is that secondary school teachers by and large think of themselves as subject-matter specialists. A workshop notice publicizing "The Great Thumbless Survival Test" (described later) might attract a few interested biology teachers, but turn off the rest of the faculty. Tie the workshop to subject matter, and

remind teachers that you are there to help with the implementation of new ideas. For example:

> "Adding an Experiential Element to the Teaching of Tenth Grade Social Studies." By participating in The Great Thumbless Survival Test, discover through your own experience ways to enhance the teaching of tenth grade social studies using an experiential approach. Teacher center staff are available to work with individual teachers after the workshop and will gladly provide technical assistance and advice back in your classroom if desired.

The Great Thumbless Survival Test[1]

This exploration into the uses of the thumb can provide secondary school teachers with an opportunity to understand how one learns through direct experience, what the advantages and limits of experiential learning are, and how an experiential approach to subject matter can and should be integrated with more conventional methods. The activity can also be a starting place for helping teachers feel comfortable expressing their feelings about their own learning habits and for helping them acknowledge that learning can be an exciting experience. Most important, the activity provides a launching pad for teachers to get at how students think, for teachers to realize that there are many approaches to solving a problem.

Time requirements: minimum—one-and-a-half hours; more if more time for discussion is desired or if the activity is used to kick off a broad-based approach to curriculum development.

Special materials needed: none necessary but some helpful. Participants can simply explore thumblessness by tying and untying their shoes, buttoning and unbuttoning their shirt, or fiddling with whatever else is already in the room. Or a series of "thumbless tests" can be set up using such items as needles, thread, and cloth, empty cans and can openers, hammers and nails, pliers, paper punches, and the like. A chalkboard and chalk or large sheets of butcher paper and magic markers are useful for recording comments during the discussion.

Space requirements: a large enough space for people to move around in and for the discussion.

Supplemental materials: books or articles on the development of experiential curriculums. Some suggested titles can be found in Appendix 1. Appendix 2 presents a chart comparing the experiential approach to more conventional methods. This chart is useful in focusing discussion on the significant elements of each approach.

Synopsis of the activity: As participants enter the room for the workshop,

[1]Adapted from Linda Allison, *Blood and Guts.* Boston: Little, Brown, 1976. p. 30.

tape each of their thumbs securely across the palms of their hands. Masking tape (one-inch width) works well. Don't be hesitant to do the taping as people are hanging up their coat, getting coffee, or greeting old friends. The purpose is for them to experiment with and experience thumblessness. Also, don't worry that they do not understand what is going on. The ambiguity of the situation can actually add to the experience, especially in helping them begin to think through what takes place in the classroom each day; students are often asked to begin a learning experience without understanding where it will lead them.

After everyone's thumbs are taped, explain that the workshop will begin with an activity in which they will experience thumblessness. Explain each of the thumbless tests that you have set up, and encourage them to take the various tests for the next 15-20 minutes, recording on a sheet of paper their impressions of how they functioned without their thumbs. At this point don't try to tie in the activity to their role as a teacher. Teachers are seldom given the chance to be just a learner. Trust that they will always view things through the eyes of a teacher, without having to be reminded to do so.

While participants are experimenting with thumblessness, wander among the groups and keep your eyes and ears open for clues to what they are learning and feeling. Listen for statements about success, failure, and frustration and especially for comments on how they solved one or another of the tests. Those data will assist you in processing the experience with the group. Encourage each participant to try a variety of tests, and give support and encouragement to those participants who are hesitant to look foolish. Your attitude is important. If you are excited about the activity, there is a good chance the participants will take the risks necessary to be an active learner.

After participants have had a chance to experiment with most of the items that make up the tests, bring them back together for a group discussion regarding thumblessness. For the moment, it is important to stay with their experience. Ask how they felt and what they learned about their own style of learning. Leave the connections with the classroom till later. (That can be difficult to do if one or more teachers are just dying to talk in terms of their students, but steer around such discussion if you can.) Ask questions that get at their feelings and insights into learning: "How many of you asked for advice from someone else or watched for clues from others' attempts to solve the problem? How many of you experienced some initial frustration? How did you cope with this frustration? Describe what you had to do to solve the problems. What did you substitute for your thumbs?" Home in on *how* they were able to function without their thumbs; without using the term, get them to talk about the *physics* of manipulating objects without thumbs.

After a thorough discussion of thumblessness, shift the discussion to what the activity has to do with the classroom. Perhaps the best place to start is to call attention to the fact that they have just learned experientially what is traditionally covered in a ninth grade biology lecture on the evolution of the opposable thumb in primates. At this point the chart in Appendix 2, which compares experiential learning with more conventional approaches, may be useful in focusing their thinking on the nature of the two strategies. A good way of getting them to think of their own situation is to say, "Yes, learning through direct experience usually does take more time, but what about its impact?" You might also ask them for instances when a hands-on approach has worked with their students.

Once the discussion has begun, it could take an unlimited variety of paths. You could simply offer the experience as food for thought, or teachers could dig right in and begin to develop ideas for adding an experiential component to the next day's lessons. Regardless of the tack you choose, try to stay focused on what mix of strategies will provide students with the best total learning experience.

The relative success of this workshop is not measured by the number of converts to the experiential approach. Rather, it is measured by whether the teachers have begun to think of their own habits as a learner and can draw parallels with the needs of their students. The workshop is not very complex. At best it is gimmicky. However, if the teacher center staff are ready and willing to move right in to the role of advisor in the classroom to help continue this exploration into the nature of the learning experience, something as simple as taping teachers' thumbs can be a good start in that direction.

Suggested follow-up activities: At a minimum this exercise in thumblessness can serve as a good icebreaker, providing participants with an opportunity to share an uncommon experience, interact with one another in an uncommon fashion, and feel more comfortable expressing feelings. Many teacher centers use a hands-on activity to introduce new groups to the center; it helps people break out of old ruts. However, the activity can be the beginning of much more. It could become the theme for a wide range of lessons in various subject areas. For example, a tenth grade English-composition teacher might use "The Great Thumbless Survival Test" to introduce a unit on creative writing; students might experiment with different handicaps (spend a day with only one good arm, wear ear protectors to discover what it is like to be deaf, etc.) and write about their feelings and perceptions. Similarly a physics teacher might develop a unit on levers, using "The Great Thumbless Survival Test" to help students focus on the dynamics of our manipulation of tools.

Perhaps the most significant way to extend the initial event would be to

use it to kick off a seminar series on "How People Learn." At a midwestern teacher center such seminars go on with a high degree of regularity because the teacher center's staff consistently find teachers "long on experience in the classroom, but short on a chance to think about learning." Following one such seminar, a teacher was heard to remark, "This was so good for me! I've been teaching for five years straight, and this is the first time I've thought about a 'philosophy of education' since I walked out of college. I'm usually just too busy dealing with the details of my classroom to think much about what's going on." Teacher centers need to help teachers think through the process of learning. "The Great Thumbless Survival Test" is a good way to begin.

Inventing Solutions to Problems: A New Way To Look at the Basics

The question of what is basic to preparing students for successful adulthood is getting much attention these days, and rightly so. If you probe beneath the surface of the question, most secondary school teachers will agree that there is more to the basics than making certain that students can read, write, and compute. The forums for examining this issue are usually study groups, parent advisory councils, or just sitting around the teachers' lounge wondering why students are not interested in schoolwork anymore. That does not need to be the case if, once again, a teacher center is willing to initiate a more innovative look at what is essential to successful adulthood. The following two invention activities use problem solving as a way for teachers to begin to look more closely at their own learning. Each activity is highly experiential, simple to execute, and easily extended by follow-up activities. The key is to follow the flowchart approach (see Figure 1) of providing an opportunity for teachers to be learners, to think about their own learning patterns and habits, and to draw parallels to their classroom activities.

As with the thumbless activity, there is a need to attract the subject-matter skeptic. A good general title for the workshop might be "The Problem-Solving Approach to Teaching the Basics" or perhaps "Is *Reliable Problem-Solving* the Fourth R?"

Time requirements: minimum—two hours if both activities are used (as I recommend). If only one activity is used and the goal is simply to send participants home with a few new ideas, one hour would be needed. As with the thumbless survival test, these activities could easily be used as the initial phase of a day-long seminar on basic skills.

Special materials needed: one raw egg per two participants; a pile of

household junk; and an array of construction tools such as scissors, tape, glue, hammers, nails, string, etc. Many centers have a "recycle bin" that contains scraps of cloth, empty cans, bottles, plastic bags, and other household and industrial scrap. Use those items if you have them, or gather a bunch of junk just for the workshop. One of the activities involves inventing a package for a raw egg, so be sure to include some sort of cushioning material in your pile of junk; styrofoam, shredded newspapers, or foam rubber will do nicely. A chalkboard and chalk or large sheets of butcher paper and magic markers are useful for recording comments during the discussion.

Space requirements: a space large enough for participants to work in, perhaps with a few tables for them to work on.

Supplemental materials: books and articles on teaching problem solving. A brief list appears in Appendix 1. The article by Christopher Jencks titled "What's Behind the Drop in Test Scores?" would be an excellent discussion piece after participants have wrestled with their own perceptions of basic skills.

Synopsis of the activity: Quite simply the activity challenges participants to invent solutions to two problems. As an introduction, point out that invention is part of our daily existence, but often not a conscious part. For example, we might have to invent a new way of propping the door open to move something in or out by ourselves, or we might have to invent a new way of getting to work while the car is in the garage. This point can take the form of a brief discussion of inventions in our everyday lives (calling attention to the fact that everything that is human-made is an invention). After this brief introduction, describe the first challenge and turn them loose. Don't worry about being neat; just dump the junk into a big pile on the floor and let participants paw through it.

Invention 1: The 15-Second Egg Timer

Set the stage for the challenge by telling the group that new inventions often arise as our social needs change (e.g., our changing needs for more efficient transportation led from the horse and buggy to the automobile). Then tell them that a new fad is sweeping the country—the 15-second egg. No longer are people willing to eat eggs cooked for the traditional three minutes. People are turning to softer yolks, and the 15-second egg is by far the most popular. As inventors, the participants are faced with the task of inventing a new egg timer because all the old ones are of the usual three-minute variety. "So use any of the junk in front of you, and invent a timer for a 15-second egg!" Participants can work in teams of two, or individually if the group is small.

Teachers often are a bit hesitant to begin fiddling with the recycle materials, but with a little coaxing, most do just fine. Wander among the groups watching and listening for clues about what people are discovering. Watch especially for how people generate ideas, how they decide which idea is best, and how they adjust if their idea does not work.

After 20-25 minutes most teams should be done. Ask each team to describe its invention to the group and give a demonstration. Demonstration time is usually a lot of fun; many creative and varied solutions appear. It is a good moment to encourage having fun with learning. Laugh with participants, and prod them to explain how they felt as they struggled with something as silly as a 15-second egg timer. Give praise for trying, and keep your eyes peeled for the one or two participants who might be thinking ahead to using the activity with their students.

As a wrap-up, ask participants to talk about how they solved the problem. How did they select alternatives? How did they deal with frustration? When did they discover what the problem really was? That is a good question to stay with for a few minutes. The challenge was to invent an egg timer, but the real problem probably arrived as, for example, they tried to get a clothespin to slide down a piece of string in exactly 15 seconds—a problem in friction and inertia. That point is a reminder that often we start the process of invention without a clear view of the real problem.

If this is the only activity you have selected to do, blend the discussion into a broader one on how problem-solving activities can be used to heighten students' interest in more traditional classroom activities. For example, altering a 15-second egg timer to time for 30 or 40 seconds is a problem in proportion and multiplication—a logical lead-in for a group of junior high school math students who are bored with the usual story problems. Don't worry that you don't know every possible application of this activity to the standard curriculum. The participants are the experts in their field; your task is to help them think through the applications.

If you intend to use this activity in conjunction with the next one, don't spend a lot of time at this point talking about classroom applications. Rather, stay with what the individual participants learned about their own learning habits and save the application until the next activity has been completed.

Invention 2: Egg Cartons for Tall People

As with the previous activity, this one is a challenge to invent a solution to "a critical problem facing our culture." The context is that humans are getting taller—a fact evident in the average height of basketball teams over the years, the size of antique chairs, etc. Their increased height is going to cause some problems for our culture. Ask for examples of some possible

problem areas; you will probably get answers like furniture design, house design, clothing design, airline-seat design, etc. After a few minutes of such brainstorming, explain that there is one area that is currently being overlooked by most inventors: egg-carton design. The egg cartons currently in use are designed to protect eggs from a two- to three-foot fall. As humans approach eight to nine feet in height, there is obviously going to be a much greater distance for eggs to fall, so a new egg carton is in order. Challenge participants to use any of the recycle materials they want and come up with a new carton. Ask them to work in groups of two or three, and give each group one raw egg. To add a real challenge, tell them that because they do not have any nine-foot people around to drop the cartons for them, they will have to throw the cartons out a second-story window or go outside and throw the cartons 30-40 feet up in the air. That will add an air of excitement; most participants will think it is impossible to build a carton that will work. Allow 25-30 minutes for participants to complete their design, and observe the activity as before.

Prior to testing the cartons, ask participants to describe their packaging technique. End the discussion by asking, "What was the *real* problem here?" Most will state it something like, "To keep the egg from breaking!"—which of course is a goal statement rather than a statement of the problem. With a little prodding they should realize that the problem is the carton's hitting the ground after a 30- to 40-foot fall—a problem of physics (inertia, mass, velocity, and "For every action there is an equal and opposite reaction"). Again, this is a good point in looking at one's own problem-solving habits. Once the testing is over (and by the way, the usual success rate is 40-50 percent!), get back into a large group to discuss what was learned regarding problem solving.

Processing the two activities should follow the last three steps of the flowchart in Figure I: have participants discuss their own learning, draw parallels to what goes on (or does not go on) in their classroom, and begin to draft a set of plans for improving instructional practices. What might come out of the discussion is the conclusion that the current school schedule is too confining and should be altered if students are going to have ample opportunities to learn through a mixture of conventional and experiential approaches. Or the discussion may suggest to the group that class size needs to be reconsidered if students are going to get the individual attention they need during experiential activities. Whatever the conclusion, don't hesitate to use the discussion as a springboard for consideration of any of the factors related to the structure and function of the secondary school and its curriculum.

Suggested follow-up activities: These simple exercises in problem solving can influence school program by leading teachers and students in a variety

of directions. Going beyond the three R's as the only basics to success in school can bring into sharp focus the need to mix book learning with experiences involving the larger community. Opportunities abound for students to develop better approaches to problem solving through direct experience with the larger community. Some schools use the current-events format to provide such a forum; for example, they offer a class for juniors and seniors that focuses on current issues in community development, politics, and the like. Other schools offer semester-long alternatives in which students learn by doing through community-service projects (e.g., building a Braille nature trail in a city park), thematic study (e.g., "Crime and Punishment in the Inner City"), or mini-internships (e.g., "shadowing" a lawyer or an insurance salesperson for a week). Not all of these situations provide constant confrontation with problems, but each gives valuable insight into the real side of adult life. The fast pace and superficiality of TV give students the impression that many of life's situations are instantly created the way coffee or Tang is (some powder, some water, and presto!); for example, not much historical context can occur in the 30 minutes allotted to "Happy Days." If students spend most of their out-of-school time watching TV (and studies indicate they do), then in school they must have opportunities to discover that real-life situations are made up of problems with complex historical contexts. As an illustration, the pollution problem in our cities is much more complex than current travel habits; it grows in part out of decisions made long ago to build suburbs, from which people have to commute to the city.

Follow up these workshops with one-on-one consultation with teachers. Work with them to plan a problem-solving orientation to their subject matter. A ninth grade math teacher in Iowa used to have her students plan a trip to the Grand Canyon as a way of involving them in "real math." She was quick to admit that the trip was really just another story problem because they did not go to the Canyon: "Why, we live in Iowa. We can't go there!" We worked on that shortcoming and came up with a new activity that had a reality context. She challenged her students (120 or so) to plan and serve themselves a monthly lunch. She divided her classes into eight teams and put a different one in charge each month. On the first day of the month she collected 45¢ from each student (the amount the students calculated to be the average spent on lunch by the group). The money was given to one of the teams, which began its planning by opening a checking account at a local bank. For the remainder of the month the team researched food prices at local supermarkets, calculated calories per individual, figured how much peanut butter was needed to make 75 sandwiches, and did other necessary tasks. On the last Friday of the month, the lunch was served. Unlike the Grand Canyon trip, for which it did not really matter whether they got the figures right because nobody was going

anywhere anyway, this project required students to take responsibility for a real problem. If they had been good problem solvers, everybody got an orange and six M & M's. If they had been sloppy with their math, they had to deal with too few sandwiches to go around, or perhaps too much food and not enough money in the checking account to pay the bill.

Opportunities for activities like that abound. They can readily arise for the teacher who gets excited about using problem solving to help students see that the three R's are tools to be used out in the world. The teacher center can and should play a vital role in the development of such an approach, and packaging a raw egg or building a 15-second egg timer is a good place to begin.

The Unseen City: It's Everybody's Neighborhood

It is important to remember that there are two levels to this experiential approach to in-service education. The first is helping the teacher to become an active learner and, from this experience, to draw parallels to the classroom setting. The thumbless activity and the two invention activities do just that. The second level, extending thinking beyond the school out into the local community, is perhaps the most crucial. Without it the focus remains too narrow. The next five activities for secondary school teachers are heavily weighted toward expanding thinking to include the broader community context. The first three appear under the heading, "The Unseen City: It's Everybody's Neighborhood." The ideas are not new, but the phrase, "The Unseen City," captures well the potential for this sort of activity. The phrase was coined by a young architect who was at the time a staff member of a large midwestern teacher center. It connotes a level of understanding that goes beyond a study of city government or a tour of historical sites. It refers to what most of us overlook—a potential that is wrapped up in the people of the community and in the natural and built environments. It suggests that if we learn to look at our community through a new set of assumptions about its resources, we will discover an abundance of learning opportunities for students of all ages.

The following Unseen City activities come from a variety of sources. Some are simple exercises for looking at the community from an uncommon angle. Others involve a more complex examination of the fabric of the community and can be the basis for a semester-long curriculum development project. They all spring from a foundation of curiosity and inventiveness in our attitudes about the community. They ask only that we risk stepping out of old patterns of thinking and let our experience surprise and stimulate us. They will fit large urban areas or small rural towns. They are the second level of in-service education, yet they have a strong base in the teacher as a learner.

Time requirements: anywhere from one hour to a full weekend. Obviously some of the activities are starter-type, and others could go on all day. As I explain them, I will suggest a time for each, but much adaptation will go on as you blend the ideas with your own community and teacher center goals.

Special materials needed: very few—just the items some of the activities might obviously require. For example, the "Community Scavenger Hunt" requires some city maps and some small notebooks or journals for recording impressions.

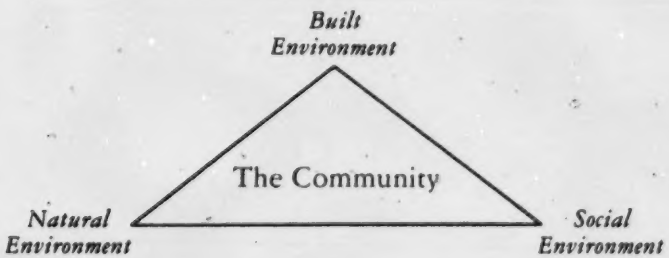
Space requirements: The community becomes the classroom, and a space to share impressions and feelings can be created out of something as traditional as the teacher center work area or as innovative as the top of the highest building in town.

Supplemental materials: books and other materials on community exploration. Some suggestions appear in Appendix 1. You may wish to create an Unseen City workbook or journal containing maps, lists of community resources, activities drawn from some of the books described in Appendix 1, and even scavenger-hunt challenges (described later). This could also be a good time to start building a community resource file of places, events, and persons. Some centers have created large displays of Unseen City-type materials; others use a changing monthly display board to call attention to ways in which district teachers have begun to use the community as a learning resource.

Synopsis of the activity: A wide variety of activities fall under the heading of Unseen City experiences. In the following pages I describe some of them. Many are based on a model of looking at the community that is illustrated by the diagram in Figure II.

Simply described, this model implies that any community is composed of three interrelated parts—the built environment (all human-made

Figure II.—A Model of the Community.



structures), the natural environment (all living things other than humans), and the social environment (the human element). Using the Unseen City philosophy, the learner is challenged to look for uncommon aspects of each of these elements—for example, "Can you find an example of a tribe in this community?"—and uncommon connections between two or three elements—for example, "What portion of the natural environment is currently most affected by changes in the built environment?" The Unseen City means digging beneath the surface of a community to uncover connections that escape the casual glance. Applied to the task of designing a curriculum for a public high school, it means asking, "What is the nature of the experience young people have out in the world beyond the school grounds?" instead of simply stating, "Adolescents just don't seem to care anymore!"

The activities include numerous situations in which the participant is asked to interview someone. Whether that is oral history or just people polling, the point is that again and again, teachers who have just been through an Unseen City experience say something like, "I was amazed at how open and friendly people were. They were so eager to share their lives with me!" or "You know, I never thought of the fact that those three components of the community are so interrelated—you 'jiggle' any one and the others move in the most fascinating way!" This people-to-people contact is an excellent way to suggest possible connections to the types of experiences students should have to leave school at age 18 and become genuine contributors to the community.

Unseen City Activity 1: Mapping Your Community

How much do you know about your community? What things do you screen out? How is your frame of reference shaped by your past experiences? By your routines? If you are overlooking some of the more gross aspects of your community, are you also overlooking some of the subtle points?

"Mapping Your Community" is a simple activity to use as an icebreaker or as a warm-up to a more involved examination of the structure of a community. It is very simple, requiring little preparation and few materials. Don't begin with the built-natural-social environment model; rather, ask participants to form groups of three to six and take 10-15 minutes to draw a map of the community on a four- by six-foot piece of paper using magic markers. Say, "Pretend some people are coming to visit and you will be giving the map to them as a guide to the character of this community. Make it complete enough so that they can use it as a guide to the logistics of visiting the community, but also include those elements that define the community's character."

After the teams have worked for 10-15 minutes, ask them to stop and group what they have shown on their map into three categories—built, natural, or social. From here, the sequence can vary considerably according to the amount of time you wish to spend. If time is short or you intend to go into other Unseen City activities, you may want to wrap up with a brief group discussion of the similarities and differences in the various maps. If you want to extend the activity, you could experiment with pairing groups to compare and collate their findings. Also, you could make the activity the start of a resource-gathering project for the teacher center that culminates in a wall-size map of the city with educational resources highlighted.

Regardless of the tack you choose, the main point is that in our day-to-day lives we screen out much of what is around us. We drive to work and fail to notice that the old post office building has been torn down. Or we notice that the trees have shed their leaves, but miss the fact that people over 70 no longer live in a particular neighborhood. Mapping the community is an excellent way of calling attention to things we miss during our daily routines.

Unseen City Activity 2: The Regional Planning Team[2]

"The Regional Planning Team" is a simulation in which participants survey the community for information to use in making decisions about the future growth of the region. Begin the simulation by having the large group brainstorm a manageable approach and appropriate questions. Participants might decide, for example, to view the region's future in terms of three categories of factors—social, cultural, and economic—and assign themselves to teams working on one category or subcategory. They might then identify critical questions to ask in each category, such as, What is the most pressing social/cultural/economic problem in this community? How will changes in the built environment influence the natural environment? How should concern for the natural environment affect the built environment? Give participants two hours to gather as much information as they can through interviews with individuals living or working near the workshop site. To heighten the challenge, participants might be told that they must talk to a selected group of people (e.g., a storekeeper, a woman with a child, and a person under 20 years of age) as well as a group they select on their own.

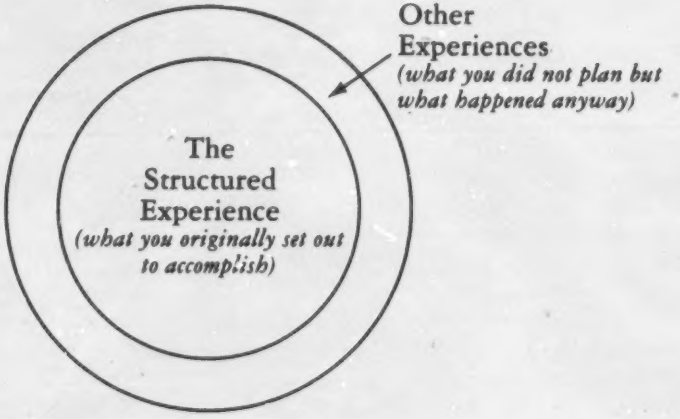
After everyone returns to the workshop site, have teams discuss their

[2]The staff of Project Adventure in Hamilton, Massachusetts, introduced me to this activity. They consider it one of their most effective initial contacts with a group of secondary school teachers. (For a description of Project Adventure, see Appendix 3.)

findings. Then ask them to outline a 5- to 10-year plan for the future development of the neighborhood or community. They should then share their plan with the larger group, with special attention to why they made certain decisions and how they designed the plan to provide the best possible alternative for the most people concerned.

From that wrap-up of the simulation, shift the discussion to a summary of the learning experience. Encourage participants to share their feelings about the interviews and what else they learned out in the community. This is a good point at which to discuss the relationship between the stated learning activity and the other learning experiences that occurred. The diagram in Figure III explains this relationship. Encourage discussion about what the relationship means in the classroom situation.

Figure III.—The Relationship Between the Structured Experience and Other Experiences.



As teachers (and learners) we are constantly dealing with the results of what we plan to experience and also with what occurs that we cannot predict (or even eliminate or control). For example, we might go to a baseball game expecting to be thrilled by superb plays, frustrated by errors or bad calls, or swept along by the emotion of the crowd. However, we have unintentionally set ourselves up for some other experiences too. Thus, we may have to deal with a loud, obnoxious drunk who is swearing in front of the children. We can never totally predict what will occur during a learning experience. When participants go into the community to interview people

for the regional-planning simulation, they will have a wide range of other learning experiences as well. In the wrap-up discussion, try to draw out these other experiences also. Probe to find out what they inferred from their contacts with people on the street. With a bit of prodding, someone might say, "You know, I never would have guessed that the young man who cares for the shrubbery around that small shopping center is also a volunteer at the local senior citizens recreation center. His views on the needs of older people were just fascinating!" or "Just walking around this neighborhood made me realize how out of touch I have become with the inner city. It's not as terrible a place as I had imagined. Lots of young couples are moving back to this part of town." A very common insight into the other side of the experience takes the form of a comment about the interview process: "People were so eager to talk with us! I've always been hesitant to speak to folks I don't know, but once I got started, I just loved talking and laughing with that older man in the park!"

At this point the diagram in Figure III can be useful in tying the discussion to the classroom. In the classroom as well, there is always the structured experience (the lecture, the study guide, the small-group discussion) and the other experience. Challenge the group to list what happens in the classroom as the other side of the lesson. Most groups will identify talking, daydreaming, and other "disruptive" behavior; also there will be observations such as, "Well, sometimes we get into really good discussions about things like values and human relationships." The point is that there is always an outer ring of activity. Within the closed community of the classroom it is often distracting and sometimes disruptive. But expand the classroom to include the world outside the school, and you open up a vast range of possibilities for other experiences.

Of course, not everything that may happen when students are out in the community will be productive. Some students may not know how to handle the freedom and will abuse the opportunity. But that just might suggest to a group of teachers and to the teacher center a real need within the district; they might become the core of a group to learn how better to manage and structure the community experience for students so as to reduce the potential for abuse.

Teachers who have been in a classroom for many years may find it difficult to place themselves and their students in a situation in which so much is unpredictable. They may need help developing new skills to deal with their concerns.

Another possible teacher center activity is to help teachers evaluate the nature of the other experiences that are taking place in their classroom. So seldom are secondary school teachers helped to examine their classroom practices without fear of judgment. With the stimulation of some community exploration, some teachers might be willing and eager to have a

teacher center person observe their class for awhile. Or teachers might want to form a study group to examine the other experiences.

Opening up discussion about the community as a resource might also become a starting point for discussion about the need for a community resource file, release time to develop community contacts, a more flexible school schedule to allow for more use of resources within walking distance of the school, or ways to use parents and other community volunteers to bring the community to the classroom.

The community is a stimulating environment for students and teachers alike. Simulations like "The Regional Planning Team" can provide a teacher center with a rich variety of topics for discussion with secondary school teachers. The teacher center might start with a trial run in one subject—for example, "How the Community Can Become a Learning Environment for Junior High School Math Students."

Unseen City Activity 3: The Community Scavenger Hunt

Unlike traditional scavenger hunts, this activity does not involve bringing back a sackful of items. Rather, participants are challenged to bring back uncommon views of the community. Some of the scavenger-hunt items require teamwork; others are done individually. Some ask participants to observe and draw inferences; others require contact with people in the neighborhood. The teacher center that created the Unseen City approach often uses the scavenger hunt over a lunch period to add a learning experience to a habitual activity. The scavenger hunt follows closely the natural-social-built environment concept of looking at a community. It can be played as a "community game" with teams competing for points, or it can be done without the challenge to win. Below are examples of scavenger-hunt items that can be used in any community. The list is meant to be representative of the types of items that would appear on a participant's scavenger-hunt sheet. Use the items as starters, and add to them as appropriate to your particular area. Some of the best scavenger-hunt items ask specific questions about the neighborhood—for example, "Which store owner on Hill Street was born on a boat in the middle of the Atlantic Ocean?"

Built-Environment Scavenger-Hunt Items

What parts of the built environment are changing at a predictable rate? At an unpredictable rate?

Form a group of four. Each of you walk in a different direction for five minutes, recording the characteristics of the built environment. Join up and compare notes.

Find a part of the built environment that most passersby probably overlook.

Find a person whose job has changed because something in the built environment changed.

Play this community game:

Find a part of the built environment that is changing in form and function. (5 points)

Find a part of the built environment that is changing in form but not in function. (5 points)

Find a building that is at least 75 years old. (5 points)

Find a building that houses a person or group that gives something away for free. (10 points)

Find a part of the built environment that is designed to add humor to the neighborhood. (10 points)

Natural-Environment Scavenger-Hunt Items

Take a five-minute stroll around the neighborhood and determine the percentage of natural-environment components you see in comparison to built- and social-environment components.

Record some of the sounds that the natural environment makes.

Develop a list of at least 10 adjectives to describe the natural environment in the neighborhood.

Find a part of the natural environment that attracts or repels you, and describe why you feel it does.

Play this community game:

Find a part of the natural environment that is used by people for more than one purpose. (5 points)

Find a part of the natural environment that is at least 25 years old. (5 points)

Find a part of the natural environment that is providing a job for someone. (10 points)

Find a spot from which it is impossible to see the natural environment. (5 points)

Social-Environment Scavenger-Hunt Items

Do some people watching. Note the use of the following:

facial expressions
gestures
posture
routines
symbols
social distance
clothing.

In terms of the social environment, can you find—

a tribe?
a moral?
something that can't be photographed?
a secret?
patriotism?

Play this community game:

Find someone who is over 75 years old and get his or her autograph. (10 points)

Shake hands with someone who was born in another country. (15 points)

Find someone who has just started a new job. (5 points)

Talk to someone who is doing something to change either the natural or built environment. (5 points)

Interview someone who has worked at the same job for at least 20 years, and find out what he or she likes and dislikes about his or her work. (15 points)

As with the two previous Unseen City activities, a community scavenger hunt can reveal a myriad of learning opportunities. It is especially rich in the other experiences described under "The Regional Planning Team," and it could easily be combined with that activity and the mapping activity to produce a full-day workshop on the community as a learning resource.

These three activities are guaranteed to get teachers excited about the community. However, secondary school teachers must impart a significant amount of factual information about their subject, and many may feel these kinds of activities will get in the way. Point out that the activities are methods for injecting realism into the traditional curriculum. Too often we sacrifice the context of learning for the content, when a simple shift in emphasis can make the learner feel more directly involved with the subject and therefore more motivated to learn. For example, the traditional concepts of ecology, economics, government, and consumer math are prime areas for involving the community as a learning resource, and teachers who have experienced for themselves the riches of the community are just the ones to begin to build a stronger foundation for the inclusion of community resources in the traditional curriculum. Some incentives may be required to get those teachers going, but release time, mini-awards, and other forms of support are available at most teacher centers and can provide turned-on teachers with just what they need to translate their own excitement into more appropriate learning experiences for students.

A Hands-On Look At Local History

Every locale can be viewed as having mirrored the development of a state, a region, or even the entire country. Each locale was discovered, settled, and developed in terms of culture, government, industry, and technology. Too often we teach about such occurrences as abstract concepts related to something far away. For example, students often write essays or draw charts about governmental procedures but rarely trace the origins of those procedures in the local community. ("Why does this town have a city-manager form of government rather than an elected mayor and city council? How were the decisions arrived at that set the patterns for growth and development in the area? What community groups and individuals have been most influential in the development of the local culture, and how did they gain such power and influence?") Or students learn names and dates associated with distant events (such as the Civil War) but never look at the similarities and differences among local events of the same period. Inventions, wars, elections, disasters, and the like become disconnected events of isolated importance rather than "interwoven pieces of the whole," as Jacob Bronowski writes in his superb book, *The Ascent of Man.*[3] That is not to suggest that everyone ought to replace traditional approaches to the study of history, science, and economics with a course on *The Ascent of Man,* but rather to suggest that each locale has its own deeply interconnected history that can provide rich insights into broader perspectives while giving students the opportunity to learn from local events.

Over the course of nearly two years a consultant team working with a group of preservice and in-service teachers in Alabama created an approach to the study of local history that has rich potential for application in any community or region. In its original design this hands-on approach to local history was spread over six two-day weekends. It viewed the evolution of local culture in five phases: settlement, the blending of cultures (outsider and American Indian), the blending of technologies (European, American, and Indian), industrialization (or the shift from the farm to the city), and the future. For the first five weekends participants used a variety of learning strategies to become directly involved with each phase of the region's history. The sixth weekend was scheduled quite a few weeks after the fifth to provide teachers with time for adaptation of the approach back in their own teaching situation prior to sharing their curriculum innovations. Teachers were recruited from a variety of disciplines. The emphasis was placed on an examination of community resources and on learning methods rather than on a strict historical approach.

[3]Boston: Little, Brown, 1973.

A brief summary of each weekend will give the reader examples of the learning strategies used and their applicability to the situation.

Weekend 1: The Land as It Was on the Eve of the European Conquest

The basic questions to be answered during this first weekend were: How did this land appear to the first non-Indian who set foot on it with the goal of colonization? What were its natural resources? its hazards? its advantages? What were the first demands it placed on the settler? Today what are the most conspicuous things that are different?

The group of Alabama teachers addressed these questions while camping out in one of the last true wilderness areas in the state. Walking across the land, eating simple foods similar to what early settlers would have carried, and sleeping out-of-doors were strategies employed to heighten awareness and add a unique reality to the experience. This was not meant to be a survival weekend; many of the participants had never even slept out before. Rather, a bit of intimate contact with the land was provided to stimulate the senses. In addition, the camping experience was employed to provide insights into the uses of outdoor adventure education and build a greater group cohesiveness than could have been accomplished in a classroom setting.

A book on local history was used during this and subsequent weekends as the only textbook for the course; it was an excellent historical narrative of its author's early travels in the area.

Weekend 2: The Development of an Alabama Culture

The culture of many areas in this country is an amalgamation of a variety of European and Native American cultural patterns. The second weekend focused on the oral transmission of culture and especially on cultural developments that had direct ties back to the land. Using the Foxfire approach to oral history (a concept developed by Eliot Wigginton in Rabun Gap, Georgia—see Foxfire, Inc., in Appendix 3 for a description) and using ballads written about Alabama, participants studied how European cultural patterns gradually replaced Indian ones, how much of the Indian cultural patterns survived, and how the new European patterns affected the land.

Participants scoured the countryside for old-timers who could recall tales told to them by their parents and grandparents. From simple questions like "What did you do for entertainment?" to more complex questions about the role of the church and moral values, the teachers probed the past through direct contact with local residents. As with people playing a community game, these teachers discovered for themselves the excite-

ment of learning through community contact. While learning a lot about the historical aspect of culture, they also came in direct contact with the present views and attitudes of local people. The local people were just as excited about a group of teachers taking time to talk to them as the teachers were about the challenge to probe the past through face-to-face discussion.

Weekend 3: The World of Work and the Development of Technology

Once people settle an area, how do work patterns emerge? What technologies are transplanted from outside, and what new technologies are created to meet the unique demands of the area? How do work and technological development affect the land?

These were the questions addressed on the third weekend, when the focus shifted from the transmission of culture to the transmission and development of technology. Participants stayed with the oral-history approach but turned to folk crafts and folk technologies as their points of interest. They tried their hand at weaving fish baskets from local materials, working with primitive forms of metallurgy, and other such tasks. Again there was ample opportunity to interact with local residents, and the oral transmission of history continued throughout the weekend. The teachers found that folk crafts need not be treated as something to be taught only to fourth graders a few weeks before Christmas, but can be a powerful technique for adding a hands-on element to the teaching of local history. They found folk crafts and the world of work to be an exciting avenue for thinking about the development of the region.

Weekend 4: The Shift from Pioneer to Urban-Industrial Society

How, when, and why did people begin to group together in small towns or villages? Why was Birmingham, Alabama, founded? What are its cultural, technological, and economic roots? Can those roots be traced back to factors related to the land? What factors continue to shape modern-day Birmingham?

On the fourth weekend the teachers dug into Birmingham itself through a variety of Unseen City approaches, and they found dozens of new doors to learning. The city took on a new meaning in terms of its relationship to the overall development of the region. For many of the teachers this weekend was the highlight of the program because with the techniques they had learned for oral history along with their own heightened curiosity, they needed little encouragement or stimulation from the program leaders. Four weeks into the program they found themselves to have become good experiential learners.

Weekend 5: Planning for the Future

Based on the cultural, technological, and economic history of the region, what is the best course of action for the future? How can future planning take into consideration all of the various points of view on resource development and use, preservation of natural spaces, and human growth? What skills will be needed to plan effectively for the future? What are the steps to a workable planning model?

These and similar questions were the focal point for the fifth weekend of the program. As with the other weekends, an attempt was made to add a realistic element to the study of the concepts. Attention shifted to a small park near Birmingham, the state's first "historical park," built around the ruins of the blast furnaces that gave rise to the Birmingham steel industry. The group of teachers was challenged to meet with park officials and take part in planning for the park's use as a learning center. Questions about park use were dealt with right alongside questions about curriculum.

Program leaders used Ian McHarg's book, *Design with Nature* (see Appendix 1), to tie decisions about the park into a larger conceptual framework for planning. Throughout the weekend the participants met with park officials and in small groups. They drafted a plan for an experiential learning center at the park that would serve teachers and students from all over the state. Most felt that their previous weekend experiences had given them the background to plan the curriculum for the proposed center and had created a feeling of teamwork that was essential to good planning.

After the fifth weekend the participants went home to reflect on their experiences and adapt what they had learned to their local school district. They came together again six weeks later to share their reflections and their methods for implementing the concepts. Some teachers had returned to their district committed to creating a similar hands-on history course for high school students. Others had been drawn to a particular aspect of the course and had worked at developing a similar component for use with their particular subject. A math teacher had produced a collection of mathematical jokes, tales, and riddles with her students through interviews with local residents. A social studies teacher had shifted his curriculum to a thematic approach, challenging his students to find examples of such themes as survival, conquest, power, and curiosity in ancient and modern history. A teacher in a small town in which education was treated as something to be endured (by both parents and students) had begun a simple oral-history magazine to build more connection between cultural pride (which was strong) and school (which was ignored). Others had gone away with only a new way of thinking about the learning process. What they eventually did with the content of the course was less important than

the fact that they themselves had had a rich experience as a learner.

This program had quite an impact on many teachers in Alabama. In addition to the 30 participants, other teachers heard about the events of the various weekends and began to ask questions. However, except for some informal follow-up provided by the program leaders, there was little done to aid in the implementation. There was not a teacher center around back then that could help them. Some of the enthusiasm for the new ideas was probably lost for lack of follow-up support and encouragement. Develop a similar program and base it out of a teacher center, and you will attract and involve the secondary teacher well beyond the actual program itself.

Live It, Learn It, and Then Go Out and Teach It

The *it* in the above title refers to specific insights into the dynamics of teaching and learning through direct experience. The title is adapted from the title of a highly successful teacher education program first developed at the University of New Hampshire. The program, Live, Learn & Teach, follows quite closely the flowchart in Figure I. It provides teachers with an intense, personal experience (in this case a 10-day backpacking and rock-climbing course), an opportunity to reflect on their learning, and an opportunity to apply what they have learned to their role as a teacher. The personal reflection occurs throughout the 10-day course and continues in a two-day retreat immediately after the course is over. Much use is made of the group experience, as both a support mechanism and another challenge to deal with. In these regards the program is very similar to each of the previous programs. However, this program has a very important twist to it. Instead of simply talking about how to apply all their learning in a real teaching setting, or going back home to work on it individually as with the hands-on history course, these teachers move straight from the retreat to positions as teachers in a six-week summer session for over 130 local students.

Why is that so unique? Stop and think about the last time you had a chance to try out something new with students with the support, encouragement, and assistance of a team of colleagues. If you are like most teachers, you seldom if ever have had that chance. I must go back to my student-teaching days for my only example, and even then I always felt the cooperating teacher was there to judge me as much as to help me do a good job. In the Live, Learn & Teach program teachers have a chance to build immediately on their personal experience in a setting that is not filled with judgment and criticism. They work as a team and have as their primary challenge to provide a summer school experience for students that makes

use of all possible community resources. Live, Learn & Teach personnel are there to assist and to guide, but the responsibility is on each participant's shoulders.

You may wonder how you could ever talk a group of secondary school teachers into giving up eight weeks of their summer to backpack through the woods for 10 days and then teach a six-week summer session. I am not suggesting that you should try. Rather, take any one of the models in this booklet (or parts of them) and offer a scaled-down version of Live, Learn & Teach—for example, a day-long course in field science or oral history and a half-day follow-up in which the workshop participants try out the new ideas with a group of Cub Scouts or perhaps summer school students. Much can be gained from a practicum experience. Too often all we provide is the chance to talk about doing something differently. Seldom are teachers given a chance to try ideas out with immediate support and assistance from their peers and workshop leaders. Some teachers might even welcome a chance to bring one of their classes to the teacher center for some sessions. For a teacher interested in oral history, that might be an excellent way for the center to provide both some technical assistance and a turn-on for the students.

As with the other examples, Live, Learn & Teach will not work wonders automatically. However, it just might be the beginning of a series of events at a teacher center that bring the development of new teaching methods and new curriculum out of the isolation of the classroom and into the encouraging atmosphere of the teacher center.

Conclusion

An experiential approach to serving secondary school teachers is significant in that it shifts the emphasis from the content of learning to the process. Nonetheless, as suggested in each activity, a wealth of topic areas can be addressed. That fact suggests another level to the experiential approach that teacher centers can use to build on initial excitement and enthusiasm, a level related to the underlying thinking process. Inherent in each activity is the challenge to think creatively in a context that is different from the setting in which most teachers and students operate. Taping one's thumbs (as described in "The Great Thumbless Survival Test") can be more than just a gimmick to get teachers to think about hands-on versus vicarious learning. It can launch a group into discussion of a wide variety of aspects of human development. For example, a group might ponder and discuss the following questions: What was the relationship

between the development of the opposable thumb in primates and the evolution of intellect? Did the dexterity achieved with the thumb free our mind for more complex thought as we perform simple tasks? Has our culture evolved into one that uses its brain more than its brawn? Why is there such a resurgence in hand crafts—are we seeking more intimate contact with the world? How can we test our assumptions along these lines?

Similarly, packaging an egg for a 30-foot drop can be the kick-off activity for a discussion of whether people are as inventive today as people were 50 or 100 years ago. For a teacher who is interested in finding new ways of using the community as a learning resource, such a discussion could be the springboard for a unit on local inventions or inventors. (Every town, large or small, has at least one person who is always fiddling with things.) For students this type of inquiry will probably touch on topics that are more relevant than what is usually found in the abstract world of the textbook. The textbook can be used as a tool, a reference; the real world of inventions and inventors can spark genuine curiosity and enthusiasm.

The Unseen City approach also offers many tangents for exploration. Building on the initial survey of the uncommon sights and sounds of the community, teachers and students can examine such aspects of the city as city planning, resource management, transportation, cultural resources, and social programs. (The movie *Near Home* portrays teachers and students engaged in such an examination; see Appendix 1.) Again, for the secondary school teacher seeking new ways to add relevance to the curriculum, going beyond the initial enthusiasm of an Unseen City exploration can bring questions into the open in such a way as to create the context for change.

People do tend to remember what they have personally experienced. A teacher center using experiential approaches to programming for secondary school teachers can certainly count on activities like "The Great Thumbless Survival Test" and "The Unseen City" to produce much talk and comment. When coupled with support systems for assisting the turned-on teacher, these activities can add an exciting and important component to the total teacher center program.

Not all secondary school teachers will jump at the chance to participate in an experiential workshop, but some will. Start with that group and demonstrate that it is okay to be a learner and okay to introduce experiential approaches into the traditional curriculum. Teacher centers need to be more than just places where teachers gather to share current practices. They need to provoke, to stimulate, to challenge teachers to think about the context for learning as well as the content. Relevance in the secondary school curriculum is not just a phenomenon of the 1960's. Secondary school students still want an educational experience that deals with the real

world. They want a balance of book learning and hands-on experience. The activities outlined in this booklet can be a start toward creating such improvements in the secondary school curriculum. A teacher who is excited about learning will find the tools he or she needs to translate content into a context that is relevant for the learner.

Appendix 1
Selected Readings

Youth, Schooling, and Schools in the 1970's: Reports of Five National Commissions

Between 1972 and 1976 five national commissions were convened to make recommendations regarding the nature of youth, schooling, and schools in the 1970's. Although each addressed the question of reforming or revitalizing secondary school education from somewhat different tacks, their conclusions were startlingly similar. In essence, the common threads were calls for the following:

- A reduction in the isolation of youth from the larger community
- An increase in the number and variety of real learning experiences available as an integral part of schooling
- More options in the methods of learning used in both required and elective courses.

The reports, which are listed below, should be made available at every teacher center.

National Association of Secondary School Principals, National Committee on Secondary Education. *American Youth in the Mid-Seventies.* Reston, Va.: the Association, 1972. Focusing on what the National Association of Secondary School Principals calls "action learning," this report addresses the need for experientially oriented programs and gives examples of programs that are already working around the country.

National Commission on the Reform of Secondary Education. *The Reform of Secondary Education: A Report to the Public and the Profession.* New York: McGraw-Hill, 1973. Built on material gathered in monthly hearings held around the United States, and tested on panels of educators, parents, and students, this report focuses on how schools must reform themselves in response to the recommendations and observations of the President's Science Advisory Committee, Panel on Youth (see later entry). In addition to the Commission's views on the state of secondary schools, the report contains 32 recommendations for reforming secondary schools.

National Panel on High School and Adolescent Education. *The Education of Adolescents: The Final Report and Recommendations of the National Panel on High School and Adolescent Education.* Washington, D. C.: U.S. Government Printing Office, 1976. This report focuses on both youth and schools and is more sympathetic to the problems of schools, suggesting that many are inherent in the new and varied demands placed on the high school today.

President's Science Advisory Committee, Panel on Youth. *Youth: Transition to Adulthood.* Washington, D. C.: U.S. Government Printing Office, 1973. This commission focused on youth rather than on schools or schooling. Its conclusions regarding the nature of youth in the 1970's and needed reforms in the school and the community are excellent material for thought and discussion.

Weinstock, Ruth. *The Greening of the High School: A Report on a Conference.* New

York: Educational Facilities Laboratories, 1973. This report focuses on alternatives to the traditional curriculum and setting. The main portion of the report describes eight programs that either modify the traditional schedule, bring the community into the school, or allow students to learn in settings outside the school.

Four excellent summaries and critiques of the reports are:

Cawelti, Gordon. *Vitalizing the High School: A Curriculum Critique of Major Reform Proposals.* Washington, D. C.: Association for Supervision and Curriculum Development, 1974.

Passow, A. Harry. "Once Again: Reforming Secondary Education." *Teachers College Record* 77: 161-187; December 1975.

Passow, A. Harry. *Secondary Education Reform: Retrospect and Prospect.* New York: Teachers College, Columbia University, 1976.

Zajchowski, Richard A. "The Establishment Critics: A Summary of the Major Reports on Secondary Education in the 70's." *Journal of Experiential Education* 1: 5-12; Fall 1978.

Experiential Education

Buswell, Mark, and others. *Senior Seminar: A Curriculum Booklet.* Revised edition. Colorado Springs: Mitchell High School, 1977. A curriculum guide to a semester-long, community-based alternative for public school seniors in Colorado Springs, this booklet contains descriptions of 16 learning modules plus information about program design and evaluation.

Buswell, Mark, and others. *To Learn How To Learn.* Colorado Springs: Mitchell High School, 1978. This student workbook on creative thinking and problem solving is designed to help students discover their own methods of incorporating direct experience into their learning activities. It includes information on techniques for problem solving, use of personal journals, and creation of individual learning contracts.

Chickering, Arthur W. *Experience and Learning: An Introduction to Experiential Learning.* New Rochelle, N. Y.: Change Magazine Press, 1977. Although geared to higher education, this booklet gives an excellent rationale for learning through direct experience and cites many references that would be useful to secondary school teachers. Its chapter on program design is especially helpful in thinking through what makes a good experiential program.

Coleman, James S. "Differences Between Experiential and Classroom Learning." *Experiential Learning: Rationale, Characteristics, and Assessment.* (Edited by Morris T. Keeton and Associates.) San Francisco: Jossey-Bass, 1976. pp. 49-61. This fine piece presents Coleman's view regarding the need to find an appropriate mix of experiential and vicarious learning activities. It is probably the best description there is of the similarities and differences. It is excellent for discussion following an experiential workshop.

Dewey, John. *Experience and Education.* New York: Macmillan, 1963. (Reprint) Written in 1938, this book is still the foundation of most arguments for expe-

riential learning. It contrasts traditional and progressive education and calls for a mix of both. It is a must for every teacher.

Eder, Sid, and Williamson, Jed. "From the Mountains to the Classroom." *American Education* 13: 17-22; November 1977. The teacher as a learner is vividly portrayed in this very readable article based on the Live, Learn & Teach program pioneered at the University of New Hampshire. The article discusses the use of the Live, Learn & Teach approach in both preservice and in-service education and stresses adapting the model to local situations.

Gibbons, Maurice. "Walkabout: Searching for the Right Passage from Childhood and School." *Phi Delta Kappan* 55: 596-602; May 1974. For most students, graduating from high school is simply an event marking the end of something they had to endure. Gibbons contrasts our culture's attitudes toward schooling as a right of passage with the more primitive culture of the Australian aborigine. He suggests we can gain much from a more substantial passage from school into the adult world. Many schools have adapted this model and now have walkabout programs for high school seniors.

Howe, Harold, II. "The Role of Experience in Education." Keynote Address at the second annual conference of the Association for Experiential Education, Estes Park, Colorado, October 1974. (Mimeo; available from the Association, Box 4625, Denver, CO 80204.) Howe challenges today's educator to think about the nature of youth, culture, and school and to consider that schools may not be presenting a method of instruction that is consistent with the needs of either the student or the culture. He draws heavily on Coleman (see earlier entry) and suggests that schools must make better use of community resources in the education of students.

Journey to the Outer Limits, 52 min., 16mm, sound, color film, 1974. *Journey* (edited version), 25 min., 16 mm, sound, color film, 1977. *Journey: How To Get Started*, teacher's guide, 1977. National Geographic Society. (Address: Seventeenth and M Streets, N. W., Washington, D. C. 20036.) These fine films and teacher's guide cover the outdoor-adventure side of experiential learning in an entertaining and enjoyable style. The guide is available separately and contains many excellent resources.

Kolb, David A., and Fry, Ronald. "Towards an Applied Theory of Experiential Learning." *Theories of Group Processes*. (Edited by Cary L. Cooper.) London: John Wiley & Sons, 1975. pp. 33-57. The authors present an experiential learning model and a Learning Style Inventory. They also describe how students have used the model and inventory in a variety of disciplines.

McClure, Larry; Cook, Sue Carol; and Thompson, Virginia. *Experience-Based Learning: How To Make the Community Your Classroom*. Portland, Ore.: Northwest Regional Educational Laboratory, 1977. This book is an excellent resource in terms of both a philosophy of experiential learning and page upon page of how-to-do-it. It covers the gamut from program development, evaluation, and documentation to creating a network of community resources.

Postman, Neil. *Teaching as a Conserving Activity*. New York: Delacorte Press, 1979. A sequel to Postman's earlier works, this new book states the case for the constant reform of schools and schooling to be in balance with the nature of

learning experiences outside schools. It challenges parents and teachers alike to pay attention to the nature of the other curriculums that affect the student and to plan learning situations that mesh experiences in school with experiences outside school.

Project Adventure. *Teaching Through Adventure.* Hamilton, Mass.: the Project, 1976. (Address: Box 157, Hamilton, MA 01936.) This is an excellent book on integrating adventure activities into the standard curriculum. It was written with the assistance of many Boston-area teachers and provides many examples of projects already under way in Boston-area schools.

Resources for Youth, a quarterly newsletter published by the National Commission on Resources for Youth. (Address: 44 West 36th Street, New York, NY 10036.) This free newsletter is a fine resource for information on youth-participation projects around the country.

Voyageur, a quarterly newsletter published by the Association for Experiential Education. (Address: Box 4625, Denver, CO 80204.) *Voyageur* contains program descriptions, book reviews, Association news, and numerous announcements of conferences and workshops.

Wigginton, Eliot. *Moments: The Foxfire Experience.* Nederland, Colo.: IDEAS, 1975. (Address: Magnolia Star Route, Nederland, CO 80466.) This fine little book provides many insights into the thinking that went into the creation of one of the most significant educational innovations of the last 20 years. Known for their best-selling books, the students and staff of Foxfire exemplify experiential learning at its finest. Wigginton's book is something of a how-to-do-it manual but is also rich in homespun educational philosophy.

Wood, Pamela. *You and Aunt Arie: A Guide to Cultural Journalism Based on Foxfire and Its Descendants.* Nederland, Colo.: IDEAS, 1975. (Address: Magnolia Star Route, Nederland, CO 80466.) A companion volume to Wigginton's book, this is the definitive how-to-do-it manual for Foxfire-type projects. It is written as a textbook for high school students and contains nearly everything you need to know to produce a cultural-journalism magazine.

Problem Solving

Books and articles on problem solving abound. Two good ones for teacher center use are:

Jencks, Christopher. "What's Behind the Drop in Test Scores?" *Working Papers for a New Society* 6: 29-41; July-August 1978. (Address: Center for the Study of Public Policy, Four Nutting Road, Cambridge, MA 02138.) Jencks discusses possible reasons for the drop in test scores and concludes that going "back to basics" is the wrong remedy.

Koberg, Don, and Bagnall, Jim. *The Universal Traveler: A Soft-Systems Guide to Creativity, Problem-Solving, and the Process of Reaching Goals.* Third edition. Los Altos, Calif.: William Kaufmann, 1976. This book has literally hundreds of activities to improve problem solving, for both individuals and groups. It is playful in its approach but provides a wealth of information and suggestions. Also, for the inspired reader it contains dozens of references to other books.

Community Exploration (Unseen City Resources)

Boston Children's Museum and Cambridge Seven Associates. *City Games: Boston.* Menlo Park, Calif.: Addison-Wesley, 1975. This book is a wonderful example of how a teacher and a group of students can design their own innovative ways of exploring a city. It is good material for designing an Unseen City workshop.

Built Environment Education, a quarterly newsletter published by Educational Futures, Inc. (Address: 2118 Spruce Street, Philadelphia, PA 19103.) This newsletter is devoted to resources and ideas for exploring the built environment with students of all ages. Of consistently high quality, it is an excellent addition to any teacher center.

Burt, Ruth Fredine, and Douglas, Marcia. *The Community Resource Person's Guide for Experience-Based Learning.* Portland, Ore.: Northwest Regional Educational Laboratory, 1977. This is a how-to-do-it manual for persons who volunteer to be a community resource for students.

Buswell, Mark, and others. *Senior Seminar: A Curriculum Booklet.* Revised edition. Colorado Springs: Mitchell High School, 1977. (For a description, see Buswell and others under Experiential Education.)

Hands On, a quarterly newsletter published by Foxfire, Inc. (Address: Rabun Gap, GA 30568.) *Hands On* provides valuable information for people interested in creating a cultural-journalism project in their community.

Jones, W. Ron. *Your City Has Been Kidnapped.* San Francisco: ZEPHYROS, n.d. (Address: 1201 Stanyan Street, San Francisco, CA 94117.) By far the best available turn-on to exploring communities, this book is lively, challenging, and full of unusual ways of exploring a neighborhood. It is excellent for designing workshops for teachers, and for use with students.

McClure, Larry. *Student Record of Community Exploration.* Portland, Ore.: Northwest Regional Educational Laboratory, 1977. This booklet provides a model for students' recording their community experience.

McClure, Larry; Cook, Sue Carol; and Thompson, Virginia. *Experience-Based Learning: How To Make the Community Your Classroom.* Portland, Ore.: Northwest Regional Educational Laboratory, 1977. (For a description, see McClure, Cook, and Thompson under Experiential Education.)

McHarg, Ian. *Design with Nature.* Garden City, N.Y.: Natural History Press (for the American Museum of Natural History), 1969. This book presents a conceptual framework for planning that is applicable to any community, large or small.

National Association of Secondary School Principals, Task Force on Secondary Schools in a Changing Society. *This We Believe: Secondary Schools in a Changing Society.* Reston, Va.: the Association, 1975. This report from a task force of secondary school administrators provides a firm rationale for using the community as a learning environment.

Near Home. 25 min., 16 mm, sound, b & w film. British Ministry of Information, 1946. (Out of print; available from major film libraries.) The film portrays a

teacher and his students in Bishop Auckland School, County Durham, England, engaged in community study. Through field trips to local farms, industries, businesses, historic sites, government houses, cultural institutions, etc., the teacher is able to produce an integrated curriculum.

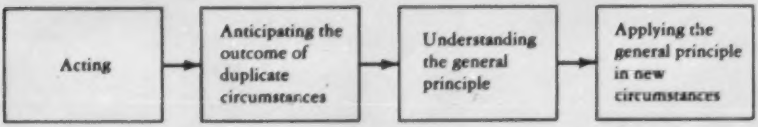
Pratt, Joanne Henderson; Pratt, James; Moore, Sarah Barnett; and Moore, William T. *Environmental Encounter: Experiences in Decision-Making for the Built and the Natural Environment.* Dallas, Texas: Reverchon Press, 1979. (Address: Box 19647, Dallas, TX 75219.) This book is a vast collection of resources and ideas for heightening awareness of the built and natural environments. It presents a fine rationale for the inclusion of such activities in the school curriculum and would be a good resource for anyone setting up an Unseen City workshop.

Synergist, a free journal published three times a year by the National Center for Service Learning. (Address: 806 Connecticut Avenue, N. W., Washington, DC 20525.) *Synergist* provides technical assistance in integrating coursework with service in the community.

Appendix 2

A Comparison of Experiential and Classroom Learning[1]

EXPERIENTIAL LEARNING: uses intrinsic motivation; is time-consuming; does not require the use of a symbolic medium (a book, lecture, or film).


Acting
Anticipating the outcome of duplicate circumstances
Understanding the general principle
Applying the general principle in new circumstances

Provides information about a sequence of cause and effect.

Involves learning the consequences of the action

Involves learning how to reach goals in the particular circumstance.

Does not imply the ability to express the principle in a symbolic medium

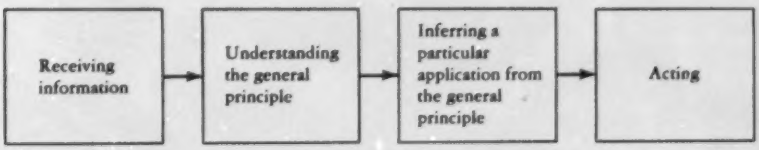
Involves seeing a connection between action and effects over a range of circumstances

Often requires being debriefed.

Involves anticipating the effect of the action

Involves the initial experience being useful in future discussions.

CLASSROOM LEARNING: reduces the time and effort to learn some new things; is the embodiment of the experiences of others; is heavily dependent on the ability to use the language of the medium.



Focuses on a general principle

Involves committing a body of information to memory

Uses a symbolic medium (a book, lecture, or film)

Requires the ability to understand the language of the medium.

Involves assimilating and organizing the information received

Involves learning the meaning of the information (going beyond just committing it to memory).

Requires cognitive abilities and a general intelligence

Usually is the step at which a test is given.

Involves applying the knowledge gained

Involves the information initially received being useful in everyday activity.

NOTE: These two models follow almost a reverse track from each other—a good point to make and discuss. The best discussions result from considering what is the best balance between the two models, rather than which is the better model.

[1] Created and adapted from James S. Coleman, "Differences Between Experiential and Classroom Learning," *Experiential Learning: Rationale, Characteristics, and Assessment.* (Edited by Morris T. Keeton and Associates) San Francisco: Jossey-Bass, 1976. pp. 49-61. Used with permission of the publisher.

Appendix 3

Organizations That Can Serve as Resources

ASSOCIATION FOR EXPERIENTIAL EDUCATION
BOX 4625
DENVER, COLORADO 80204

Drawing its members from nearly every sector of education, the Association for Experiential Education is an excellent resource and networking agent. It sponsors an annual conference on experiential education (currently including over 100 workshops and seminars); it publishes *Voyageur*, a quarterly newsletter (see Appendix 1); and it publishes the semiannual *Journal of Experiential Education*. It also operates a Jobs Clearing House (with monthly announcements) and has a consultant directory.

CENTER FOR YOUTH DEVELOPMENT AND RESEARCH
48 McNEAL HALL
UNIVERSITY OF MINNESOTA
ST. PAUL, MINNESOTA 55108

The Center can provide information on action-learning programs in Minnesota, including program descriptions, curriculum ideas, classroom activities, and specific ideas for short- and long-term community experiences. Researchers at the Center are currently involved in a major project to determine methods for evaluating the outcomes of experiential learning.

COLLABORATIVE FOR EXPERIENTIAL LEARNING
BOX 1637
BOONE, NORTH CAROLINA 28607

The Collaborative is a network of well-established practitioners in the field of experiential education. It is involved in the development of teacher education models at seven colleges and universities well distributed geographically across the United States. It also is working on the design and implementation of experiential programs in schools that use the community for learning resources.

EDUCATION AND WORK PROGRAM
NORTHWEST REGIONAL EDUCATIONAL LABORATORY
710 S.W. SECOND AVENUE
PORTLAND, OREGON 97204

This group is currently engaged in three important studies related to experiential education: a study of factors students associate with excellent learning experiences in the community and those they associate with nonlearning experiences; a study of common and unique elements among various experiential approaches; and a study to explore the construct of responsibility and how young people develop and grow in this area. The program has published many resources, including *Experience-Based Learning: How To Make the Community Your Classroom* by Larry McClure, Sue Carol Cook, and Virginia Thompson; *Student Record of Community Exploration* by Larry McClure; and *The Community Resource Person's Guide for*

Experience-Based Learning by Ruth Fredine Burt and Marcia Douglas (see Appendix 1 for descriptions).

FOXFIRE, INC.
RABUN GAP, GEORGIA 30568

Creators of the popular Foxfire magazines and books, Eliot Wigginton, his students, and his staff continue to demonstrate that the cultural base of any community can provide fertile ground for experiential programs in language arts, science, and social studies. Foxfire publishes *Hands On*, a quarterly newsletter (see Appendix 1). Two books related to the Foxfire concept are *Moments: The Foxfire Experience* by Wigginton and *You and Aunt Arie* by Pamela Wood (see Appendix 1).

NATIONAL COMMISSION ON RESOURCES FOR YOUTH
36 WEST 44TH STREET
NEW YORK, NEW YORK 10036

The National Commission on Resources for Youth serves as a national clearinghouse of youth-participation projects in schools and communities. It maintains a file of over 800 descriptions of programs in which young people are performing unusual and/or significant activities in their community. The Commission's newsletter, *Resources for Youth*, is described in Appendix 1.

NATIONAL CENTER FOR SERVICE LEARNING
ACTION
806 CONNECTICUT AVENUE, N. W.
WASHINGTON, D. C. 20525

The Center provides information on and assistance in developing programs that help students learn through community service. Its publications are many and very useful. See Appendix 1 for a description of the Center's journal *Synergist*.

NATIONAL SOCIETY FOR INTERNSHIPS AND
EXPERIENTIAL EDUCATION
1735 I STREET, N. W., SUITE 601
WASHINGTON, D. C. 20006

The Society encourages the integration of experiential education into American schooling and promotes quality in experiential education programs. Its three major functions are to be a forum and clearinghouse, to provide technical assistance, and to conduct research on experiential education. It publishes three directories of internships that are postsecondary in orientation but provide good models for secondary school internships. They are as follows: *Directory of Public Service Internships: Opportunities for the Graduate, Post-Graduate, and Mid-Career Professional, Directory of Undergraduate Internships*, and *Directory of Washington Internships*.

PROJECT ADVENTURE
775 BAY ROAD
HAMILTON, MASSACHUSETTS 01936

A member of the National Diffusion Network, Project Adventure began as an

Elementary and Secondary Education Act, Title III program at Hamilton-Wenham Regional High School near Boston. Its objective was to apply some of the educational concepts of Outward Bound to public education in ways that were economically feasible and included an academic component. Today Project Adventure continues to work with teachers and schools throughout the country, assisting in the design of experiential adventure curriculums in nearly all areas of study. It has published a wealth of materials, most notably *Teaching Through Adventure* (see Appendix 1).

About the Author

Ron Gager is well qualified to write about teacher centers and secondary school teachers: for eight years he was a secondary school teacher, first in Grand Rapids, Michigan, then in Colorado Springs, and for two-and-a-half years he was director of the Kansas City Learning Exchange, an independent teacher center. His secondary school teaching experience in Colorado Springs included responsibility for Senior Seminar, a community-based experientially oriented option that high school students could take for a whole semester's credit. Currently Gager is a free-lance consultant, working primarily with teacher centers, staff development programs, and experiential education. He earned his bachelor's degree at Central Michigan University and his Master of Education in experiential education at the University of Colorado at Boulder. Summers frequently find him with Outward Bound as an instructor or program director.